CS 3.2 Communications Services Functional Requirements

Communications Services requirements are addressed in this section. The requirements for six service areas that are addressed in this section are:

1. Message Transfer Services Requirements (CS 3.2.1)
2. Voice Communications Requirements (CS 3.2.2)
3. Visual Services Requirements (CS 3.2.3)
4. Information Transfer Services Requirements (CS 3.2.4)
5. Information Technical Services Requirements (CS 3.2.5)
6. Network Services (CS 3.2.6)

CS 3.2.1Message Transfer Services Requirements

Message Transfer services include the following requirements :

1. **Personal Message Transfer services**, including the capability to send, receive, forward, store, display, and manage personal messages. This includes the capability to append files and documents to messages. Messages may include any combination of data, text, audio, graphics, and images and should be capable of being formatted into standard data interchange formats. This service includes the use of directories and distribution lists for routing information, the ability to assign priorities, the use of pre-formatted electronic forms, and the capability to trace the status of messages. Associated services include a summarized listing of incoming messages, a log of messages received and read, the ability to file or print messages, and the ability to reply to or forward messages.
2. **Organizational Message Transfer services**, including the capability to send, receive, forward, display, retrieve, prioritize, and manage predefined and unformatted organizational messages. Organizational messages should use standard data interchange formats and may include any combination of data, text, audio, graphics, and images. This includes the capability to review and authenticate messages. Incoming message processing services include receipt, validation, distribution, and dissemination of incoming unformatted messages based on message profiling, message precedence, and system security restrictions. User support services include the selection and display of messages from a message queue, on-line management of search profiles, search and retrieval of stored messages based on message content comparison to queries formulated by the analysts, and composition of record messages for transmission. Outgoing message processing services include coordination by Command's staff organizations, authorized release, and verification of record messages prior to transmission.

CS 3.2.1.1 Message Handling

CS 3.2.1.1.1 GCCS COE message transfer services shall be capable of handling both individual and organizational messages. This includes not only record (character-oriented and formatted) and binary messages but also electronic mail (E-mail).

Traceability: TAFIM, JMCIS
Priority 1

CS 3.2.1.1.2 GCCS COE user mail services shall provide message processing that interfaces directly with the user.

Traceability: TAFIM, JMCIS
Priority 1

CS 3.2.1.1.3 Communications Services shall provide message formatting and conversion, message in-processing, to include the viewing, logging, profiling, precedence processing, and user notification of incoming message traffic (based on message bounding).

Traceability: JMCIS, CSWG
Priority 1

CS 3.2.1.1.4 Message transfer services shall provide for message dissemination to include distribution by precedence, distribution by profile, and distribution by mailing list.

Traceability: JMCIS, CSWG
Priority 1

CS 3.2.1.1.5 Message transfer services shall process incoming and outgoing messages based on message precedence.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.1.6 Message transfer services shall provide for message out-processing to include transmittal, retransmittal, forwarding, logging, precedence processing, and review and release of messages.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.1.7 Message transfer services shall provide for message support to include storage, retrieval, query, and printing.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.1.8 Message transfer services shall provide an e-mail interface with a training function

Traceability: JMCIS, CSWG, AMPE
Priority 3

CS 3.2.1.1.9 An e-mail interface shall be provided with simulation and modeling support applications to support the generation of simulated message traffic during exercises and training.

Traceability: JMCIS, AMPE, TAFIM
Priority 3

CS 3.2.1.1.10 Message transfer services shall provide a mechanism for validation of message formats and types on both incoming and outgoing message traffic.

Traceability: JMCIS, AMPE, TAFIM
Priority 1

CS 3.2.1.1.11 Message transfer services shall provide a mechanism for notification and correction of messages with invalid formats.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.1.12 Message Transfer services shall be capable of handling messages addressed to single or up to sixteen destinations.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.1.13 Message Transfer Services shall support 7-bit character, 8-bit character, and binary messages.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.1.1 Record Message Handling

This class of messages usually consists of formatted messages such as OTH GOLD, USMTF, etc. within a standard wrapper such as JANAP 128, ACP 126M, etc. Subsequent distribution of messages/data by Message Processing Software or other client applications is external to Communications service. The services provided by Message Processing Software will handle posting messages for human consumption in the appropriate electronic mail box as well as automatically processing messages for computer consumption to update system databases.

CS 3.2.1.1.1.1 The output of Communications Services for character-oriented messages shall be messages or data that will be passed to other functions or processes to do automatic message handling, message parsing and subsequent update of the system's database engine(s).

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.1.2 Binary Message Handling

Some communications interfaces may have client message decoders which will interact more directly with the interface conveying data to and from database engine(s) of the system where message logging, accounting, and other features used for record messages, do not apply. Should those features be applied they would adversely affect the timeliness and usefulness of the data. This class of messages usually consists of high speed/volume binary data which is decoded and encoded by commonly structured message/data client services and capable of interacting with other common system API structures. Binary message handling segments, which are compliant with GCCS COE, provide seamless translation and data forwarding between dissimilar external communications circuits, such as the TADIL J, TADIL A, and so on. Tactical information from the multi-TADIL capabilities of GCCS shall be fused with strategic formatted messages such as, OTCIXS, TADIXS, and USMTFMTF, which provides the automatic and timely transfer of tactical and strategic information.

CS 3.2.1.1.2.1 Tactical Digital Information Link TADIL-A (Link-11)

Link-11 is a tactical digital information link which employs netted communication techniques and standard message format for the exchange of digital information among airborne, land based, submarine, and shipboard tactical data systems. The JMCIS Link-11 segment is a target of the GCCS communications architecture, developed in compliance with the GCCS COE, and is suitable as a building block for future GCCS TADIL binary message/data client services.

CS 3.2.1.1.2.2 Tactical Digital Information Link TADIL-J (Link-16)

Link-16 is the functional equivalent of Link-11 and Link-4A combined. It is a frequency hopping, jam resistant, high capacity tactical digital information link enabling the exchange of secure tactical data. The introduction of Link-16 into USN ships, land based units and aircraft as well as joint and international military services will present significant operational and technical challenges in the GCCS environment.

The GCCS TADIL J binary message/data client service built upon the JMCIS Link 11Link11 model will include all individual platform J-series message requirements in a single software segment. User platforms will select the appropriate subset of J-series messages applicable to their group by enabling or disabling the encoding and decoding software support of a particular message or sub-set of a message. The TADIL J encoders and decoders shall use the GCCS Model 5 database which is a super-set of the current JMCIS Tactical Database Manager (TdbmTDBM), providing a fused database for all tactical message/data client services. Commonality with existing system API services will simplify the inter-operability efforts associated with the integration of this TADIL into the GCCS architecture.

CS 3.2.1.2 Message Transfer Service Functional Capabilities

The Message Transfer Service Functional Capabilities have been divided up into 5 areas that conceptually match the process classes that would make up a notional Message Transfer subsystem architecture:

- Input/Output Devices
- Input/Output Interfaces
- Input/Output Interface Control
- Message Management
- Message Distribution, Collection and Validation Management.

This corresponds to the Message Transfer Services Notional Architecture drawing (See Figure 1). The following paragraphs contain examples of I/O devices, interfaces, protocols, and networks.

CS 3.2.1.2.1 Message Bounding

CS 3.2.1.2.1.1 The system shall provide a configurable and extensible mechanism for specifying message or data bounding criteria to be used by various interfaces in the handling of message traffic.
Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.1.2 The system shall be able to bound messages using the rules of the JANAP 128 message envelope type.
Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.1.3 The system shall be able to bound messages using the rules of the ACP 123 message envelope type.
Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.1.4 The system shall be able to bound messages using the rules of the ACP 126M message envelope type.
Traceability: JMCIS, CSWG, AMPE
Priority 2

CS 3.2.1.2.1.5 The system shall be able to bound messages using the rules of the ADCCP message envelope type.
Traceability: CSWG, AMPE
Priority 2

CS 3.2.1.2.1.6 The system shall be able to bound messages using the rules of the JANAP 127 (NATO) message envelope type.
Traceability: JMCIS, CSWG, AMPE
Priority 2

CS 3.2.1.2.1.7 The system shall be able to bound messages using the rules of the DD173 message envelope type.
Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.1.8 The system shall be able to bound messages using the rules of the JMF message envelope type.
Traceability: JMCIS, CSWG
Priority 1

CS 3.2.1.2.1.9 The system shall be able to bound messages using the rules of the JOTS Header message envelope type.

Traceability: JMCIS
Priority 1

CS 3.2.1.2.1.10 The system shall be able to bound messages using the rules of the OS411 message envelope type.

Traceability: JMCIS, COE
Priority 1

CS 3.2.1.2.1.11 The system shall be able to bound messages using the rules of the OS516 message envelope type.

Traceability: JMCIS, COE
Priority 1

CS 3.2.1.2.1.1 Message Identification

CS 3.2.1.2.1.1.1 The system shall provide a configurable and extensible mechanism for specifying message format and message type identification criteria to all for the message format/type labeling of current and future messages.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2 Message Management

Message Management includes Message Logging, Precedence Queuing, Alternate Channel Selection/Routing, Message Envelope Format Conversion, Message Storage/Retrieval, Message Archive/Retrieval, and Message Auto Print. These areas will be discussed in the following paragraphs. In addition, the Message Management APIs will be discussed.

CS 3.2.1.2.2.1 Message Logging

CS 3.2.1.2.2.1.1 The system shall provide a mechanism for the logging of messages or data transmitted to or received from an interface. The log will contain information about the message (e.g., message type, classification, precedence, DTG, etc.) as well as status information on the message (e.g., queued, pending processed failed, etc.).

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.1.2 The system shall provide a mechanism for manipulating messages that have been logged. This mechanism provides capabilities such as viewing, correction/editing, reprocessing, retransmission, etc.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.1.3 The system shall support creation, deletion, and management of multiple message logs on both incoming and outgoing traffic allowing for the segregation of messages into different logs based on message type.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.1.4 Communications subsystem shall output character-oriented messages to other functions or processes to do automatic message handling, message parsing and subsequent update of the system's database engine(s).

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.2 Precedence Queuing

CS 3.2.1.2.2.2.1 Messages shall be processed on a first-in, first-out (FIFO) basis, by precedence. The highest precedence queued messages shall be processed before any lower precedence queued messages, regardless of their order of arrival.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.2.2 Lower precedence messages shall be pre-empted (broken) by higher precedence (Emergency Command Precedence or Flash) messages on all external JANAP 128 circuits.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.3 Alternate Channel Selection/Routing

CS 3.2.1.2.2.3.1 The system shall provide the capability for manually and automatically routing outgoing traffic from one interface to another within the constraints of the alternate routing tables.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.4 Message Envelope Format Conversion

CS 3.2.1.2.2.4.1 The system shall provide a mechanism for the conversion of certain message envelope formats to other message envelope formats as is appropriate for the transmission interface. This format conversion shall be done for all specified message envelopes as follows:

- JANAP 128

  Traceability: JMCIS, CSWG, AMPE
  Priority 1

- ADCCP

  Traceability: JMCIS, CSWG, AMPE
  Priority 1

- ACP 123

  Traceability: JMCIS, CSWG, AMPE
  Priority 1

- ACP 126M

  Traceability: JMCIS, CSWG, AMPE
  Priority 1

- ACP 127 (NATO)

  Traceability: JMCIS, CSWG, AMPE
  Priority 1

- DD 173

  Traceability: JMCIS, CSWG, AMPE
  Priority 1

- JMF

  Traceability: JMCIS, CSWG, AMPE
  Priority 1

- JOTS Header

  Traceability: JMCIS, CSWG, AMPE
  Priority 1

CS 3.2.1.2.2.5 Message Storage/Retrieval

CS 3.2.1.2.2.5.1 The system shall provide a mechanism for the storage and retrieval of messages or data transmitted to or received from an interface for a period up to 30 days.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.6 Message Archive/Retrieval

CS 3.2.1.2.2.6.1 The system shall provide a mechanism for the long term storage and retrieval of messages and logs to off-line media.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.7 Message Auto Print

CS 3.2.1.2.2.7.1 The system shall provide a mechanism for automatically printing messages or data based on various criteria such as source, plain language addressee (PLA), and message type.

Traceability: JMCIS, CSWG, AMPE
Priority 1

CS 3.2.1.2.2.8 Message Management APIs

CS 3.2.1.2.2.8.1 Communications Services shall provide APIs to the Message Processor module allowing client applications to manipulate messages through the services of the Message Processor module.

Traceability: CSWG
Priority 1

CS 3.2.1.2.2.8.2 Communications Services Message Management APIs will support C, C++, and Ada client applications.

Traceability: CSWG
Priority 1

CS 3.2.1.2.3 Message Distribution, Collection and Validation Management

The following paragraphs will present the requirements for Message Transmission/Release, Message Routing/Auto Forward/Distribution, Message Validation, Message Notification/Alerting, Message Distribution, Collection and Validation APIs, and User Interface Clients.

CS 3.2.1.2.3.1 Message Transmission/Release

CS 3.2.1.2.3.1.1 The system shall provide a mechanism for releasing/transmitting messages or data. This mechanism will support both automatic and manual destination selection.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.2 Communications Services shall support a Plain Language Addressees (PLA) database capable of storing PLA, Address Indicator Groups (AIG), and routing indicators (RI) associated with them.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.3 The PLA database shall be maintained on non-volatile storage and a backup for the PLA database will be provided.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.4 Communications Services shall provide a method for the database administrator (DBA) to change the PLA database on-line. Changes made by the operator shall persist over a system restart.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.5 Communications Services shall allow the operator to perform PLA routing insertion.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.6 Communications Services shall allow the operator to perform PLA routing correction.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.7 Communications Services shall allow the operator to perform message distribution information insertion.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.8 Communications Services shall allow the operator to perform message distribution information correction.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.9 Communications Services shall allow the operator to perform service message handling support.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.10 Communications Services shall route messages based on PLAs found within the message. This applies to all message bounding types.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.11 Communications Services shall provide the option of routing message traffic to an alternate destination based on precedence.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.12 Communications Services shall provide the option of routing message traffic to an alternate destination based on routing indicators.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.13 Communications Services shall provide the option of routing message traffic to an alternate destination based on classification.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.14 Communications Services shall provide the option of routing message traffic to an alternate destination based on other message header fields as required.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.15 Alternate routes shall be established and canceled by a command that is accessible only by the system administrator.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.16 Communications Services shall provide the capability to process up to 500 addressees per message.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.1.17 Communications Services shall display at Communications operator position rejected messages and messages that cannot be processed because of format and/or address errors. The display shall include the message and message error type. The message error type shall be displayed in its original form and in plain English form. Communications system operator shall be able to correct each message so it can be processed as a new message within the system.

Traceability: AMPE, CIS
Priority 1

CS 3.2.1.2.3.2 Message Routing/Auto Forward/Distribution

CS 3.2.1.2.3.2.1 The system shall provide a mechanism to automatically forward message or data to other destinations based on various criteria of the message (e.g., source, PLA, message type).

Traceability: JMCIS, AMPE
Priority 1

CS 3.2.1.2.3.2.2 The system shall provide a mechanism for distribution of messages to back-end clients based on criteria such as routing indicators, office codes, and key words. This distribution shall support the Message Processing Services, message processing clients, etc.

Traceability: JMCIS, AMPE
Priority 1

CS 3.2.1.2.3.2.3 The system shall provide a mechanism to automatically forward/translate multi-TADIL data and formatted messages.

Traceability: JMCIS, COE
Priority 1

CS 3.2.1.2.3.3 MessageMesage Validation

CS 3.2.1.2.3.3.1 The system shall provide a mechanism for the validation of message formats and types on both incoming and outgoing traffic.

Traceability: JMCIS, AMPE
Priority 1

CS 3.2.1.2.3.3.2 The system shall provide a mechanism for the logging, notification, and correction of messages with invalid formats.

Traceability: JMCIS, AMPE
Priority 1

CS 3.2.1.2.3.4 Message Notification/Alerting

CS 3.2.1.2.3.4.1 The system shall provide a mechanism for client applications to request notification for messages of interest.

Traceability: AMPE
Priority 1

CS 3.2.1.2.3.4.2 The system shall provide a mechanism for client applications to request alerting for messages of interest.

Traceability: AMPE
Priority 1

CS 3.2.1.2.3.5 Message Distribution, Collection and Validation APIs

CS 3.2.1.2.3.5.1 The system shall provide APIs to the Message Distribution, Collection and Validation Management module allowing client applications to manipulate messages through the services of the Management module.

Traceability: JMCIS, CSWG
Priority 1

CS 3.2.1.2.3.5.2 The APIs to the Message Distribution, Collection and Validation Management module shall support C, C++, and Ada client applications.

Traceability: JMCIS, CSWG
Priority 1

CS 3.2.1.2.4 User Interface Clients

CS 3.2.1.2.4.1 The system shall provide default user interface clients to interact with the various communications services for the creation, deletion, activation, deactivation, and configuration of communications interfaces, messages, logs, etc. These client applications will use the defined APIs of the system services and provide the basic capabilities for exercising the various aspects of Communication subsystem without the presence of other service areas/client applications.

Traceability: JMCIS, CSWG
Priority 1

CS 3.2.1.3 Message Accountability

Message accountability is the real-timetime capability to prevent unrecoverable message loss or error and the off-line capability to identify the location and potential cause of message loss.

Message output capability is the capability to deliver valid received messages to the output destination system.

CS 3.2.1.3.1 Communications Services shall provide a message input accountability of 99.999% with an objective of 100% of messages handled through protocol acknowledgment.

Traceability: AMPE
Priority 1

CS 3.2.1.3.2 Communications Services shall provide a message output accountability of 99.999% with an objective of 100% of messages handled through protocol acknowledgment.

Traceability: AMPE
Priority 1

CS 3.2.1.3.3 Message accountability shall be performed automatically within Communications Services.

Traceability: AMPE
Priority 1

CS 3.2.1.3.4 Communications Services shall provide error detection to ensure message accountability as messages and data are processed from one device to another. Operator notification shall be provided for all error detected.

Traceability: AMPE
Priority 1

CS 3.2.2Voice Communications Requirements

Voice communications services include the following requirements :

1. Enhanced telephony services, including call forwarding, call waiting, programmed directories, teleconferencing, automatic call distribution (useful for busy customer service areas), and call detail recording. Enhanced telephony services should also include precedence and preemption capabilities.
2. Broadcast services that provide one-way audio or audio/video communications services between a sending location and multiple receiving locations. Broadcast services shall also include data communications services.
3. Combat Net Radio services that provide audio communications between multiple sending and receiving locations.

Voice services provide inter-human voice communications and include real-time and stored voice messages. Telephone services and radio services are specialized forms of voice communications services. An overall voice communications service may actually consist of individual telephone services and radio services. The voice communications services must employ information transfer services in addition to actual voice transmission.

Real-Time voice communications consists of secure and unsecure ship/shore, air/ground and ground/ground voice. In addition a teleconferencing capability provides for secure and unsecure real-time synchronized voice and imagery.

Recorded voice communications, consisting of classified and unclassified recorded messages would be available to dial-in users through any one of a number of commercial off-the-shelf telecommunications processors.

The Department of Defense utilizes specialized communications equipment for the purpose of tactical voice communications. The primary formats for voice communications are wide-band 0-25KHZ (UHF Line-of-Sight and SATCOM) and narrow-band (HF USB and SATCOM). There are newer formats (DAMA, SINCGARS, EHF SATCOM, SHF SATCOM, JTIDS) which will play larger roles in DoD voice communications in the future as additional platforms gain these capabilities.

Teleconferencing which provides real-time synchronized voice and imagery is a technology on the horizon for the Department of Defense. This technology is currently being employed utilizing commercial communications paths. In the future DoD SATCOM communications paths will be utilized. The SHF/EHF programs have conducted successful field testing and are proceeding with modifying the cold war nuclear survivable protocols to support extremely high bandwidth (6MHZ uncompressed) multiplexed imagery and voice.

CS 3.2.2.1 Telephone Services

CS 3.2.2.1.1 Communications Services shall support 500 type telephones (rotary dial).

Traceability: CIS
Priority 1

CS 3.2.2.1.2 Communications Services shall support 2500 type telephones (DTMF).

Traceability: CIS
Priority 1

CS 3.2.2.1.3 Communications Services shall support STU-III telephones.
Traceability: CIS
Priority 1

CS 3.2.2.1.4 Communications Services shall support digital telephone sets with multiple lines.
Traceability: CIS
Priority 1

CS 3.2.2.1.5 Communications Services shall support digital telephones with multiple keys for special features, display, data capability, etc.
Traceability: CIS
Priority 1

CS 3.2.2.1.6 Communications Services shall support KY 68, DSVT, TA-954 DNVT telephones operation at 16 or 32 Kbps.
Traceability: CIS
Priority 1

CS 3.2.2.2 Facsimile Services

CS 3.2.2.2.1 Communications Services shall support any facsimile machine designed in accordance with EIA Standard RS-465, Group 3 Facsimile Apparatus for Document Transmission.
Traceability: CIS
Priority 1

CS 3.2.2.3 Data Communications Services

Communications Services shall be capable of connecting Data Terminal Equipment (DTE) or Data communications Equipment (DCE) such as terminals, personal computers, modems or mainframe host computers. the following data communications capabilities shall be supported:

CS 3.2.2.3.1 Communications Services shall support Asynchronous Transmission to 19.2 Kbps via RS 232-D.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.3.2 Communications Services shall support Synchronous Transmission to 64 Kbps via RS 232-D.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.3.3 Communications Services shall support Direct Connection of ASCII terminals, IBM PCs, or IBM compatible PCs via RS 232-D interfaces.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.3.4 Communications Services shall support Public Switched data Services (PSDS) - Switched 56 Capability.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.3.5 Communication Services shall support MIL-STD-1553B.
Traceability: JMCIS, COE
Priority 1

CS 3.2.2.3.6 Communication Services shall support MIL-STD-1397A.
Traceability: JMCIS, COE
Priority 1

CS 3.2.2.4 Voice Communications Services

Voice communications services shall provide the following features:

CS 3.2.2.4.1 Communications Services shall support Call forwarding (all calls/busy, and no answer).
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.2 Communications Services shall support Call waiting.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.3 Communications Services shall support Programmed directories.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.4 Communications Services shall support Teleconferencing.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.5 Communications Services shall support Automatic call distribution (useful for busy customer service areas).
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.6 Communications Services shall support Call Park (allows putting a call on hold and disconnecting the call, the call can then be answered from any telephone set).
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.7 Communications Services shall support Call detail recording.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.8 Communications Services shall support Precedence.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.9 Communications Services shall support Preemption.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.10 Communications Services shall support Hot lines.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.4.11 Communications Services shall support Class-of-service restrictions.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.5 Broadcast Services

CS 3.2.2.5.1 Communications services shall support broadcast services that provide one-way audio communications services between a sending location and multiple receiving locations.
Traceability: CIS, CSWG
Priority 1

CS 3.2.2.5.2 Communications services shall support broadcast services that provide one-way digital communications services between a sending location and multiple receiving locations.

Traceability: CIS, CSWG
Priority 1

CS 3.2.2.6 Combat Net Radio

CS 3.2.2.6.1 Communications Services shall support Combat Net Radio services that provide audio communications between multiple sending and receiving sites.

Traceability: CIS, CSWG
Priority 1

CS 3.2.2.6.2 In the Combat Net Radio network where the voice and data sharing the same net, Communications Services shall withhold the data transmission when the voice Push-to-talk button is activated to prevent voice and data collisions.

Traceability: CIS, CSWG
Priority 1

CS 3.2.2.6.3 Communications Services shall be capable of detecting both voice and data when they present on the net.

Traceability: CIS, CSWG
Priority 1

CS 3.2.3 Visual Services Requirements

Visual services include the following requirements as defined in TAFIM Volume 2:

1. Shared screen services that provide audio teleconferencing with common workstation windows between two or more users. This includes the capability to refresh windows whenever someone displays new material or changes an existing display. Every user is provided the capability to graphically annotate or modify the shared conference window.
2. Teleconferencing services that provide two-way video transmission between different sites. These services include full motion display of events and participants in a bi-directional manner, support for the management of directing the cameras, ranging from fixed position, to sender directed, to receiver directed, to automated sound pickup.

CS 3.2.4 Information Transfer Services Requirements

Communications services shall support the transfer of C4I information between users and/or C4I systems (e.g., voice, data, video, messages, images, etc.).

CS 3.2.4.1 Message Transfer Services

See paragraph CS 3.2.1.

CS 3.2.4.2 Voice Services

See paragraph CS 3.2.2

CS 3.2.4.3 Visual Services

Visual Information transfer include the following requirements:

1. Conferencing services that allow groups to participate in conferences. These conferences may not occur in real time. Conferees or invited guests can drop in or out of conferences or

subconferences at will. The ability to trace the exchanges is provided. Services include exchange of documents, conference management, recording facilities, and search and retrieval capabilities.

CS 3.2.5 Information Technical Service Management

Services supporting the management, integration, accounting, and security of the other IT Services and the systems, facilities, and resources comprising those services. This service includes specific services such as network management, message management, and electronic key management. These services are used by Communications Functional area but are covered by the Network Management Functional area SRS.

CS 3.2.6 Network Services Requirements

Network services are provided to support distributed applications requiring data access and applications interoperability in heterogeneous or homogeneous networked environments. They include the following functional areas as defined in TAFIM Volume 2:

1. **Data communications**, which include protocols for reliable, transparent, end-to-end data transmission across communications networks.
2. **Personal/microcomputer support** for interoperability with systems based on a variety of operating systems.

CS 3.2.6.1 Introduction

This section contains background information regarding the GCCS COE network services.

CS 3.2.6.1.1 Open Systems Interconnection (OSI) Model

A discussion of the GCCS network services requirements necessitates a background presentation of the Open Systems Interconnection (OSI) reference model. The OSI model, portrayed in Figure 1. Open Systems Interconnection Model, is the model used for data communications in the GCCS COE. Each of the seven layers in the model represents one or more services or protocols (a set of rules governing communications between systems), which define the functional operation of Communications between user and network elements. Each layer (with the exception of the top layer) provides services for the layer above it. This model aims at establishing open systems operation and implies standards-based implementation. It strives to permit different systems to accomplish complete interoperability and quality of operation throughout the network.

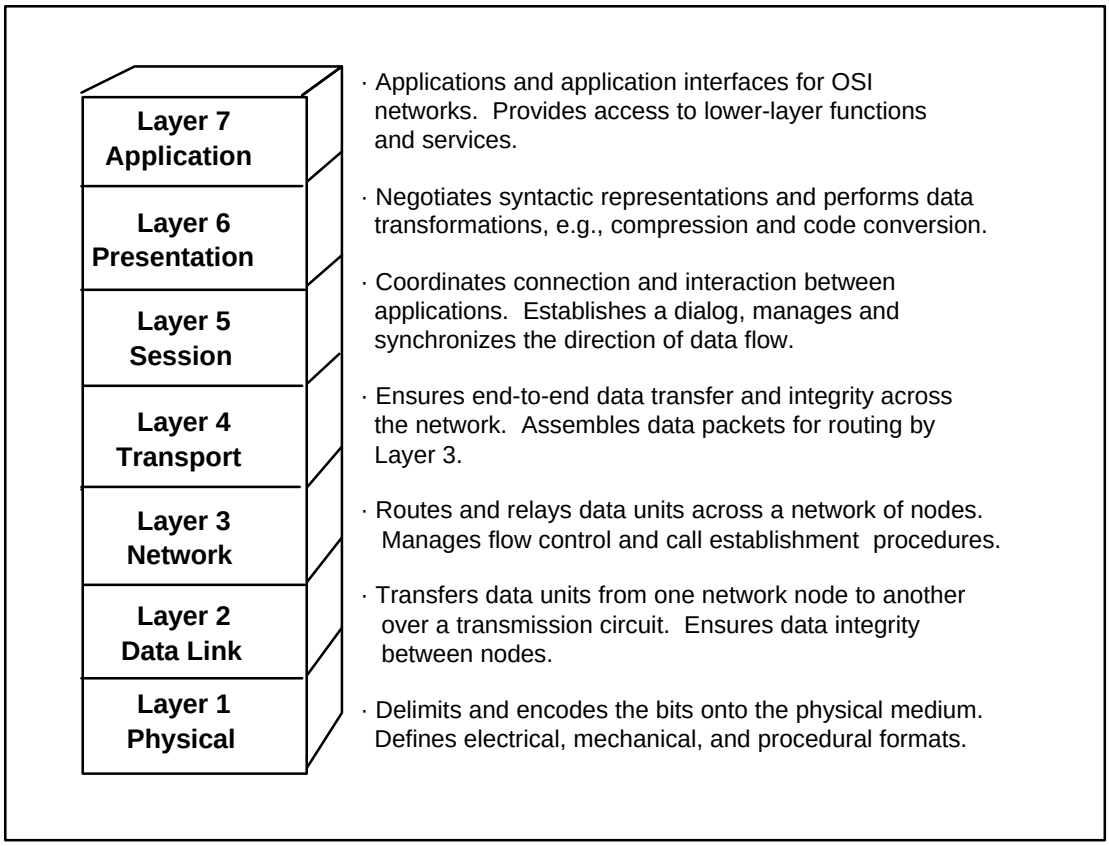

Figure 1. Open Systems Interconnection Model

The seven layers of the OSI model are structured to facilitate independent development within each layer and to provide for changes independent of other layers. Stable international standard protocols in conformance with the OSI reference model layer definitions have been published by various standards organizations.

These architectural levels are:

- The Transmission Level (below the OSI) provides all of the physical and electronic capabilities, which establish a transmission path between functional system elements (wires, leased circuits, interconnects, etc.).
- The Network Switching Level (OSI layers 1 through 3) establishes connectivity through the network elements to support the routing and control of traffic (switches, controllers, network software, etc.).
- The Data Exchange Level (OSI layers 4 through 7) accomplishes the transfer of information after the network has been established (end-to-end, user-to-user transfer) involving more capable processing elements (hosts, workstations, servers, etc.).
- The Applications Program Level (above the OSI) includes the support and mission-area applications (non-management application programs).

CS 3.2.6.1.2 Internet Protocol Suite (IPS)

The Internet Protocol Suite (IPS) is based on the Internet Protocol (IP) and Transmission Control Protocol (TCP), which were developed within the U.S. military-funded research establishment and have since grown to become the basis of the worldwide Internet, is generally referred to as the TCP/IP Protocol Suite. Standardization of the IPS is carried out by the Internet Engineering Task Force (IETF). The IETF process

puts its emphasis and owes its success to the policy of "rough consensus and running code," which means that IETF members develop multiple, interoperable implementations of draft protocol specifications before they are declared as full Internet Standards.

The IPS, although neither required nor precluded by GOSIP, is widely used by Federal agencies. Today there is significantly more actual interoperation within and between Federal agencies using IPS than using OSI standards, as well as between Federal agencies and the public. The Profile for Open Systems Internetting Technologies (POSIT) as described in FIPS Publication 146.2 and the Government Network Management Profile (GNMP) as described in FIPS Publications 179.1 have been selected as the guidance documents for internet access.

CS 3.2.6.1.2.1 The GCCS COE Network Services shall use the TCP/IP or POSIT.
Traceability: TAFIM, JMCIS
Priority 2

CS 3.2.6.1.3 Dependence Upon GCCS Distributed Computing Services SRS

Distributed computing services provide specialized support for applications that may be physically or logically dispersed among computer systems in a network yet wish to maintain a cooperative processing environment. The classical definition of a computer becomes blurred as the processes that contribute to information processing become distributed across a facility or a network. As with other cross-cutting services, the requisite components of distributed computing services typically exist within particular service areas.

Therefore, traditional network services, such as Domain Name Service, are more appropriately discussed within the GCCS Distributed Computing Services SRS. Some of these traditional network services are contained within this SRS for completeness, however, the requirements for these services reside within the Distributed Computing Services SRS.

CS 3.2.6.1.4 Dependence Upon GCCS Management Services SRS

Similarly as with the Distributed Computing Services SRS, there are network management services, for example, Simple Network Management Protocol (SNMP) which are more appropriately discussed within the GCCS Management Services SRS. The requirements for network management are found in the GCCS Management Services SRS.

CS 3.2.6.2 Data Communications

This section describes the requirements for GCCS COE data communications. These include the protocols for reliable, transparent, end-to-end data transmission across communications networks. It is divided into the following functional areas:

- Network Communications
- Network Protocols
- Network Applications
- Network Services Defined in Other GCCS Requirements Specifications

CS 3.2.6.2.1 Network Communications

This section covers the lower layer communications protocols required for GCCS. GCCS COE networks shall be based on Ethernet standards (IEEE 802.2, 802.3, 802.4, 802.5), with Fiber Distributed Data Interface (FDDI) backbones to support larger installations. Hardware components shall be compatible with the ISO 8802-3 (IEEE 802.3) specification. MIL-STD-187-700 (Interoperability and Performance Standards for the Defense Information System) shall be used to share digital information across common user communication systems.

CS 3.2.6.2.1.1 Local Area Network Communications

There are numerous local factors, physical and organizational, that will affect each GCCS site local area network (LAN) architecture. Network performance and loading will drive most site architecture decisions. A strategy which should be considered is to isolate workgroups on to subnetworks, reducing the network traffic on the GCCS site network backbone.

CS 3.2.6.2.1.1.1 Network Services shall support IEEE 802.2
Traceability: TAFIM, JMCIS
Priority 1

CS 3.2.6.2.1.1.2 Network Services shall support IEEE 802.3
Traceability: TAFIM, JMCIS
Priority 1

CS 3.2.6.2.1.1.3 Network Services shall support IEEE 802.4
Traceability: TAFIM, JMCIS
Priority 1

CS 3.2.6.2.1.1.4 Network Services shall support IEEE 802.5
Traceability: TAFIM, JMCIS
Priority 1

CS 3.2.6.2.1.1.5 Network Services shall support IEEE 802.11
Traceability: TAFIM, JMCIS
Priority 1

CS 3.2.6.2.1.1.6 In cases where higher network loads are required, FDDI shall be used. This can be used for the whole network or in conjunction with Ethernet to provide a high speed backbone to support several slower Ethernet subnets.
Traceability:
Priority ???

CS 3.2.6.2.1.1.7 ISO 9314 shall be used for the protocols and physical connections for FDDI media access.
Traceability:
Priority ???

CS 3.2.6.2.1.1.8 LANs can be connected together by routers to serve a wider community.
Traceability:
Priority ???

CS 3.2.6.2.1.2 Metropolitan Area Communications

Metropolitan Area Networks (MANs) link non-contiguous premises within a fixed location. IEEE 802.6 defines a strategy for connecting peer networks together at high speeds using a Dual Queue Dual Bus architecture to support tow-way communications.

CS 3.2.6.2.1.2.1 IEEE 802.6 shall be used for connecting GCCS MANs.
Traceability: TAFIM, JMCIS
Priority 2

CS 3.2.6.2.1.3 Wide Area Network Communications

A Wide Area Network (WAN) uses common carrier leased lines or tactical links to connect distant site networks and require additional communications support to cover the distances.

CS 3.2.6.2.1.3.1 X.25 shall be used for GCCS WANs.

Traceability: NSWG
Priority 1

CS 3.2.6.2.1.3.2 The Link Access Protocols-Balanced (LAP-B) link protocols shall be used to provide X.25 packet service between GCCS sites and remote GCCS sites.

Traceability: NSWG
Priority 1

CS 3.2.6.2.1.3.3 GCCS Communications services shall support the PPP protocol.

Traceability: NSWG
Priority 1

CS 3.2.6.2.1.3.4 GCCS Communications services shall support the SLIP protocol.

Traceability: NSWG
Priority 1

CS 3.2.6.2.1.3.5 GCCS Communications services shall support the OSPF-2 protocol.

Traceability: NSWG
Priority 1

CS 3.2.6.2.1.4 Other Network Communications

Trends for GCCS requirements are moving towards networked multimedia applications and increasing demands for network services support that can handle greater amounts of data in a shorter time period. The current GCCS network architecture will have to evolve towards higher speed network communication technologies to support this increased demand for bandwidth.

CS 3.2.6.2.1.4.1 Asynchronous Transfer Mode (ATM) provides point-to-point connections between network nodes, giving each pair of stations full network bandwidth. GCCS Communications Services shall support ATM.

Traceability: NSWG
Priority 1

CS 3.2.6.2.1.4.2 Synchronous Optical Network (SONET) has been developed as a layer 1 and 2 fiber optic transmission service for very high speed facilities. GCCS Communications Services shall support SONET.

Traceability: NSWG
Priority 2

CS 3.2.6.2.1.4.3 Broadband Integrated Services Digital Networks (B-ISDN) is a service requiring transmission channels capable of supporting rates greater than the 1.544 Mbps primary rate. It will provide, by using ATM and SONET technologies, interactive and distribution services ranging in bandwidth from 64 Kbps to 644 Mbps. GCCS Communications Services shall support B-ISDN.

Traceability: NSWG
Priority 2

CS 3.2.6.2.1.4.4 Frame Relay is a switched service designed to improve communications performance through reduced delays and more efficient bandwidth utilization. GCCS Communications Services shall support Frame Relay.

Traceability: NSWG
Priority 2

CS 3.2.6.2.1.4.5 Switched Multimegabit Data Services (SMDS) is an on-demand layer 3 switching service where each frame contains the originating and terminating addresses. GCCS Communications Services shall support SMDS.

Traceability: NSWG
Priority 2

CS 3.2.6.2.1.4.6 Fast Ethernet promises to increase the current 10 Mbps Ethernet bandwidth to 100 Mbps. GCCS Communications Services shall support Fast Ethernet.

Traceability: NSWG
Priority 2

CS 3.2.6.2.2 Network Protocols

Network protocols provide network services between platforms on the network. The network protocol standards provide connections, routing, flow control, and data format services for applications to communicate across networks using common protocols without specific knowledge of details of each other's implementation.

CS 3.2.6.2.2.1 GCCS network protocols shall be based on Transmission Control Protocol/Internet Protocol (TCP/IP).

Traceability: NSWG
Priority 1

CS 3.2.6.2.2.2 DoD TCP/IP, as defined by MIL-STD-1778 and MIL-STD-1777, contain errors, omissions, and ambiguities. Therefore, the following Network Working Group Request for Comment (RFC) documents shall be used to define TCP/IP:

Traceability: NSWG
Priority 2

- RFC 1123, Requirements for Internet Hosts-Application and Support
- RFC 1122, Requirements for Internet Hosts-Communications Layers
- RFC 1009, Requirements for Internet Gateways.

GCCS shall comply with all of the requirements specified in the above RFCs that are identified as MANDATORY.

Traceability:
Priority ???

CS 3.2.4.2.2.3 The OSI network protocols shall be supported by Communications Software as specified in the FIPS 146-2 and FIPS 179.1.

Traceability: NSWG
Priority 1

CS 3.2.4.2.2.4 The Tactical network protocols as specified in Appendix A shall be supported by Communications Services.

Traceability: NSWG
Priority 1

CS 3.2.4.2.2.5 Every GCCS site which must operate under both TCP/IP and POSIT protocol suites will have to make implementation decisions based on cost/technical analysis of the environment and availability of products.

Traceability: NSWG
Priority 2

CS 3.2.6.2.3 Network Applications

Network applications provide standard, common services, building upon the protocols and communications methods that have been previously defined. Some applications which have traditionally been a part of network services, such as Network File System (NFS), are defined by other GCCS requirements documents (the Distributed Computing Services SRS, in this case). These traditional applications will be noted here, but will be defined in the GCCS SRS to which they belong.

Network applications provide standard, common services, building upon the protocols and communications methods that have been previously defined. Some applications which have traditionally been a part of network services, such as Network File System (NFS), are defined by other requirements sections of this document (e.g., Distributed Computing Services requirements, in this case).

CS 3.2.6.2.3.1 Electronic Mail (E-mail) Services

E-mail services define the message formats and services for providing message exchange between heterogeneous computer systems in a network environment.

CS 3.2.6.2.3.1.1 For GCCS COE, the Simple Mail Transfer Protocol (SMTP) shall be used. RFC 821 (Message Protocols) and RFC 822 (Text Message Formats) shall be used.

Traceability: NSWG, JMCIS
Priority 1

CS 3.2.6.2.3.1.2 RFC 1123 shall be used for implementation requirements and updates to RFC 821 and RFC 822.

Traceability: NSWG, JMCIS
Priority 1

CS 3.2.6.2.3.1.3 The Multipurpose Internet Mail Extensions (MIME) shall be used for moving non-text (i.e., binary files) e-mail within the context of SMTP. RFC 1341 shall be used as the MIME standard.

Traceability: NSWG, JMCIS
Priority 1

CS 3.2.6.2.3.2 Directory Services

Directory Services allow users to identify, by name, network resources such as servers, files, disks, etc., and gain access to the resource without needing to know where they are located in a network. These requirements are contained within the GCCS Distributed Computing Services SRS.

CS 3.2.6.2.3.3 File Transfer

File transfer services are a set of agreements on procedures that specify how information organized into files can be transferred from one computer to another through homogeneous and heterogeneous networks. These network services provide for the transfer of file data to another location only and do not address data formats or translations which must be accomplished by the source and target systems applications.

CS 3.2.6.2.3.3.1 GCCS COE shall use the File Transfer Protocol (FTP) as specified in MIL-STD-1780. The minimum implementation that is identified in section 4.1.2.13 of RFC 1123 shall be used.

Traceability: NSWG
Priority 1

CS 3.2.6.2.3.4 Terminal Access

Terminal standards identify services and protocols for remote terminal access to network computing resources.

CS 3.2.6.2.3.4.1 MIL-STD-1782, Telnet, shall be used as the standard for simple asynchronous terminal capability.

Traceability: NSWG
Priority 1

CS 3.2.6.2.3.5 Network Information Discovery and Retrieval

This section describes various applications for use in finding information on the network.

CS 3.2.6.2.3.5.1 The Internet Gopher, is a client-server document search and retrieval protocol. The Gopher, as described in RFC 1436, shall be supported.

Traceability: NSWG
Priority 2

CS 3.2.6.2.3.5.2 HyperText Transport Protocol (HTTP) is a fast search and retrieval protocol used by the World Wide Web (WWW) to transfer HyperText documents from one computer to another. The primary document format is the HyperText Markup Language (HTML). HTTP and HTML shall be supported.

Traceability: NSWG
Priority 2

CS 3.2.6.2.3.5.3 Network News Transfer Protocol (NNTP) is a protocol for the distribution, inquiry, retrieval, and posting of news articles. The GCCS COE shall support the NNTP as defined in RFC 977. The format of news articles shall be in accordance with RFC 850, Standard for Interchange of Usenet Messages.

Traceability: NSWG
Priority 2

CS 3.2.6.2.3.6 Remote Procedure Calls (RPCs)

Remote Procedure Calls (RPCs) allow applications to invoke procedures that reside on remote hosts. The requirements are defined in GCCS Distributed Computing Services SRS.

CS 3.2.6.2.3.7 Transparent File Access

Transparent File Access describes standards for sharing and managing data in heterogeneous networks. One example implementation is the Network File System (NFS) Protocol Specification (RFC 1094). Transparent file access requirements are defined in the GCCS Distributed Computing Services SRS.

CS 3.2.6.2.3.8 Distributed Authentication

Distributed Authentication describes how a user is validated to use the resources of the network. Distributed Authentication requirements are defined in the GCCS Distributed Computing Services SRS.

CS 3.2.6.2.3.9 Network Time Services

Distributed network systems need a consistent time service. Many distributed services, such as distributed file systems and authentication mechanisms, compare time stamps from different network clients. Network time services requirements are defined in the GCCS Distributed Computing Services SRS.

CS 3.2.6.2.3.10 Network Services Applications Defined in Other Requirements Specifications

As a summary, the following network services applications, which have traditionally been a part of network services, are defined in other GCCS SRS:

- Directory Services
- Remote Procedure Calls
- Transparent File Access
- Distributed Authentication
- Network Time Services

The following network services, which have traditionally been a part of network services, are defined in other sections of this SRS (most are in the Distributed Computing Services section):

- **Directory Services** allow users to identify, by name, network resources such as servers, files, disks, etc., and gain access to the resource without needing to know where they are located in a network.
- **Remote Procedure Calls (RPCs)** allow applications to invoke procedures that reside on remote hosts.
- **Transparent File Access** describes standards for sharing and managing data in heterogeneous networks. One example implementation is the Network File System (NFS) Protocol Specification (RFC 1094).
- **Distributed Authentication** describes how a user is validated to use the resources of the network.
- **Time Services**: Distributed network systems need a consistent time service. Many distributed services, such as distributed file systems and authentication mechanisms, compare time stamps from different network clients.

CS 3.2.6.3 Personal/Microcomputer Support

Personal microcomputers can be used to access the resources of the GCCS network. However, they are required to have only a subset of the requirements which have been discussed above. The following sections discuss the requirements for personal computers to connect to GCCS networks.

CS 3.2.6.3.1 Personal computers shall support a standardized connection to the GCCS COE networks (Ethernet).

Traceability: NSWG
Priority 1

CS 3.2.6.3.2 Personal computers shall support the TCP/IP protocol in order to connect to GCCS networks.

Traceability: NSWG
Priority 1

CS 3.2.6.3.3 All GCCS personal computer applications shall be Winsock-compliant. This includes the following network applications:

- E-mail

  Traceability: NSWG
  Priority 1

- File transfer

  Traceability: NSWG
  Priority 1

- Terminal Access

  Traceability: NSWG
  Priority 1

- Network Information Discovery and Retrieval (NIDR)

Traceability: NSWG
Priority 1

CS 3.2.6.3.4 Communications services shall provide the heterogeneous interface capability for one system to utilize the network services provided on one platform to communicate with another platform.
Traceability: NSWG
Priority 1

CS 3.2.7Requirements Submitted by the Army

CS 3.2.7.1 The Basic Communications Interface Level (BCIL) shall utilize multicast transport services (one-to-many and many-to-one).
Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.2 The Basic Communications Interface Level (BCIL) shall provide for unlimited messages sizes. Any packetization will be transparent to the BCIL user.
Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.3 The Basic Communications Interface Level (BCIL) shall provide support for 1.2 millisecond (ms) port-to-port timing between processes on the same machine within the system configuration.
Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.4 The Basic Communications Interface Level (BCIL) shall provide support for transfer rate of 850 messages per minute with 500 bytes per message where 75% of the messages are inter-processors and 25% are intra-processors.
Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.5 The Transport Packages shall provide multicast transport services (one-to-many and many-to-one).
Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.6 Communications Services shall provide the capability to extract default message relaying information from an application directory or from current network configuration and status information.
Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.7 Communications Services shall provide the capability to utilize the workstation resident protocol layers over multiple subnetworks.
Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.8 Each layer of the implemented protocol stacks shall be functionally autonomous from any adjacent layer.
Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.9 Communications Services shall provide the capability to notify an application program in case of a rejected or abort transmission after recovery and retry mechanisms have been exhausted.
Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.10 In addition to the specific layer requirements detailed in subsequent paragraphs, the ISO Reference Model shall be implemented IAW the basic reference model documents and certain layer independent standards as listed below:

1. ISO 7498-1984: Information Processing Systems, Open Systems Interconnection, Basic Reference Model

   Traceability: ARMY, 20 July 1996
   Priority ???

2. ISO 7498 AD 1-1987: Information Processing Systems, Open Systems Interconnection, Basic Reference Model, Addendum 1: Connectionless Mode Transmissions

   Traceability: ARMY, 20 July 1996
   Priority ???

3. ISO 7498-2-1989: Information Processing Systems, Open Systems Interconnection, Basic Reference Model, Part 2: Security Architecture

   Traceability: ARMY, 20 July 1996
   Priority ???

4. ISO 7498-3-1989: Information Processing Systems, Open Systems Interconnection, Basic Reference Model, Part 3: Naming and Addressing

   Traceability: ARMY, 20 July 1996
   Priority ???

5. ISO 7498-4-1989: Information Processing Systems, Open Systems Interconnection, Basic Reference Model, Part 4: Management Framework

   Traceability: ARMY, 20 July 1996
   Priority ???

6. ISO 8509-1987: Information Processing Systems, Open Systems Interconnection, Service Conventions

   Traceability: ARMY, 20 July 1996
   Priority ???

7. ISO DIS 9545-1989: Information Processing Systems, Open Systems Interconnection Application Layer Structure

   Traceability: ARMY, 20 July 1996
   Priority ???

8. FIPS PUB 145: Government Open Systems Interconnection Profile (GOSIP), 24 August 1988

   Traceability: ARMY, 20 July 1996
   Priority ???

9. FIPS PUB 145-1: GOSIP Version 2.0, April 1989

   Traceability: ARMY, 20 July 1996
   Priority ???

10. NIST 500-177: Stable Implementation Agreement System Interconnection Protocol, Version 2, Edition 1, December 1988

    Traceability: ARMY, 20 July 1996
    Priority ???

11. NISTIB 88-3824-2: Ongoing Implementation Agreement for Open Systems Interconnection Protocols: Continuing Agreement, December 1988

    Traceability: ARMY, 20 July 1996
    Priority ???

CS 3.2.7.11 **Message Handling Capability.** The message handling capability shall:

CS 3.2.7.11.1 Provide the capability to send formatted messages using the Message Handling System (MHS) protocol as defined in CCITT X.420, CCITT X.411, NIST 500-177, and FIPS PUB 146

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.11.2 Provide the capability to receive formatted messages using the MHS protocol as defined in CCITT X.420, CCITT X.411, NIST 500-177, and FIPS PUB 146

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.11.3 MHS protocols shall provide for an MTA multi-destination delivery

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.12 With respect to ISO 8650-1988: Information Porcessing Systems, Open Systems Interconnection, Protocol Specification for the ACSE,

CS 3.2.7.12.1 The application layer shall provide Association Control service as defined in ISO 8649/CCITT X.217 and FIPS Pub 146

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.12.2 The application layer shall provide an ACSE protocol as defined in ISO 8650/CCITT X.227, NIST 500-177, and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.12.3 The application layer shall provide an Association Control Service that supports the "ISO 8650-ACE1" Abstract Syntax as defined in ISO 8650/CCITT X.227, NIST 500-177, and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.13 With respect to ISO DIS 9066-2.2: Information Processing Systems, Text Communications, Reliable Transfer, Part 2: Protocol Specification, 1989,

CS 3.2.7.13.1 The application layer shall provide Reliable Transfer service for the MHS protocol as defined in ISO 9066-1.2/CCITT X.218, NIST 500-177, and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.13.2 The Application layer shall provide the RTSE protocol for the MHS protocol as defined in ISO 9066-2.2/CCITT X.228, NIST 500-177, and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.13.3 The Application layer shall provide the Reliable Transfer Service for the MHS protocol that supports the "ISO 9066-RTSE1" Abstract Syntax as defined in ISO 9066-2.2/CCITT X.228, NIST 500-177, and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.14 The application layer shall provide a Remote Procedure Call (RPC) service IAW ISO DIS 10148-1988 Information Processing Systems Basic RPC Using OSI Remote Operations.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.15 **Management.** The application layer shall provide the capability for a management service using the Common Management Information Protocol (CMIP) as defined in ISO DIS 9596, FIPS PUB 146, and NIST 500-177.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.16 With respect to ISO DIS 8571-5-1989: Information Processing Systems, Open Systems Interconnection, File Transfer, Access and Management, Part 5: Implementation Conformance Statement Proforma,

CS 3.2.7.16.1 The FTAM Service shall provide the "FTAM-PCI" Abstract Syntax as defined in ISO 8571-1 to 5, FIPS PUB 146, and NIST 500-177.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.17 With respect to ISO 9041 PDAD2-1989: Information Processing Systems, Open Systems, Interconnection, Virtual Basic Terminal Class Protocol, Addendum 2: Additional Functional Units,

CS 3.2.7.17.1 The application layer shall provide the capability for terminal emulation in accordance with FIPS PUB 146 and NIST 500-177.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.17.2 The VT Services shall provide the "ISO VT" Basic Abstract Syntax as defined in ISO, NIST 500-177, and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.18 **Directory** (GOSIP Version 3-1990). The application layer shall provide the capability for the Directory Service as defined in ISO 9594-1 to 8, FIPS PUB 146, CCITT X.500 and NIST 500-177.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.19 The Presentation layer shall provide a Connection Oriented Presentation Service as defined in ISO 8822/CCITT X.216, NIST 500-177, and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.20 The Presentation layer shall provide a Presentation Protocol Kernel Functional Unit as defined in ISO 8823/CCITT X.226, NIST 500-177, and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.21 The Presentation layer shall provide a Presentation Service that suports Abstract Syntax Notation One (ASN.1) Transfer Syntax as defined in ISO 8824/CCITT X.208, ISO 8825/CCITT X.209, NIST 500-177, and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.22 The Presentation layer shall provide a Presentation Service that supports at least three(3) Presentation Contexts as defined in NIST 500-177.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.23 The communications software shall provide the capability to bypass the Presentation protocol kernel functional unit for interoperability with QIP systems provided any security features are not bypassed.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.24 The Transport Service shall provide the capability for the OSI connectionless transport protocol as defined in ISO 8602, FIPS PUB 146, and NIST 500-177.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.25 The connectionless Transport Services shall provide the capability to send messages using a multicast address.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.26 The connectionless Transport Services shall provide the capability to receive messages using a multicast address.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.27 The CLNP shall support the Network Service as defined in ISO 8348 and ISO 8348 Addendum 1 and FIPS PUB 146.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.28 The network layer shall provide the capability for the ES-18 Routing capability defined in ISO 9542, FIPS PUB 146 and NIST 500-177.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.29 The host-to-host layer shall provide an open public interface to the DoD host-to-host Services.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.30 For received Autodin messages, Communications Services shall provide the capability to transfer concatenated messages (i.e., the message segments are combined back into the original message) or transfer separate Autodin message segments depending on the request from an applicaton program.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.31 Communications Services shall provide the capabillity to perform a structured (normal) termination of any or all communications which are active.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.32 The communications software shall provide the capability to **receive** data via Army Data Distribution System (ADDS) networks.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.33 The communications software shall provide the capability to **disassociate from** Army Data Distribution System (ADDS) networks.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.34 Communications Services shall have the capability to provide a connection oriented interface to WAN interface devices using the network service primitives as defined in ISO 8348/CCITT X.213.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.35 Communications Services shall have the capability to provide a connectionless interface to WAN interface devices using the CLNP primitives as defined in ISO 8348 Addendum 1.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.36 Communications Services shall provide the capability to configure particular channels within WAN interface devices with specific, selectable protocols during normal operatin of the other physical channels.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.37 Communications Services shall provide the capability to initiate transmissions over individual channels selectively within WAN interface devices without affecting the operation and/or state of the other physical channels.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.38 Communications Services shall provide the capability to configure and control any communication channel operating parameters for the devices supported by the WAN interface devices without preventing the operation of the other physical channels; this includes device configuration of selected channels, selected channel restart, and selected channel shutdown.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.39 Communications Services shall provide the capability to initialize the selected communication protocol within WAN interface devices channels without preventing the operation of the other physical channels.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.40 Communications Services shall provide the capability to download subscriber tables to the WAN interfacing devices.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.41 Communications Services shall provide the capability to regulate traffic over the Tactical Computer Unit/Portable Computer Unit (TCU/PCU) WAN interfacing devices on a per channel basis without affecting the operation or state of other physical channels.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.42 Communications Services shall provide channel status and utilization information on request of an application program; channel status will include successful transmission count, aborted transmission count, received message segments with not correctable error(s) count and COMSEC crypto re-synchronize count.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.43 Communications Services shall provide the capability to poll the WAN interfacing devices to ensure a channel is available before transmission.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.44 Communications Services shall provide the capability for an application program to define, without taking a workstation off-line, an alternate channel for retransmission if the retry count for

data transmission is exceeded, consistent with the security level of the alternate channel and connected workstation.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.45 In the event the allowable retry count is reached during data transmission over a channel, Communications Serivces shall provide the capability to automatically attempt to utilize the assigned alternate channel for transmission.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.46 Communications Services shall provide the capability to load the CPP/WAN Interface Devices functions.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.47 Communications Services shall provide the capability to control the CPP/WAN Interface Devices functions.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.48 Communications Services shall provide the capability to create:

- PLA, RI, and MSE telephone number tables

Traceability: ARMY, 20 July 1996
Priority ???

- Distribution lists

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.49 Communications Services shall provide the capability to store:

- PLA, RI, and MSE telephone number tables

Traceability: ARMY, 20 July 1996
Priority ???

- Distribution lists

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.50 Communications Services shall provide the capability to maintain:

- Subscriber tables

Traceability: ARMY, 20 July 1996
Priority ???

- Distribution lists

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.51 Communications Services shall provide the capability to control interfaces to WAN interface devices:

CS 3.2.7.51.1 Using the network service primitives as defined in ISO 8348/CCIT X.213.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.51.2 Using the CLNP primitivies as defined in ISO 8348 Addendum 1.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.51.3 Configuring particular channels within WAN interface devices with specific, selectable protocols during normal operation of the other physical channels.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.51.4 Initiating transmissions over individual channels selectively within WAN interface devices without affecting the operation and/or state of the otehr physical channels.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.51.5 Configuring any communication channel operating parameters for the devices supported by the WAN interface devices without preventing the operation of the other physical channels. This includes device configuration of selected channels, selected channel restart, and selected channel shutdown.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.51.6 Initializing the selected communication protocol within WAN interface devices channels without preventing the operation of the other physical channels.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.51.7

CS 3.2.7.51.8 Downloading subscriber tables to the WAN interfacing devices.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.51.9 Regulating traffic over the Tactical Computer Unit / Portable Computer Unit (TCU/PCU) WAN interfacing devices or a per channel basis without affecting the operation or state of other physical channels.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.51.10 Polling the WAN interfacing devices to ensure a channel is available before transmission.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.52 Communications Services shall provide the capability to control the recipt of formatted messages from external interfaces to internal applications.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.53 Communications Services shall provide the capability to control the sending of formatted messages from internal applications to external interfaces.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.54 Communications Services shall provide the capability to define the number of recovery retries to be made in the event of failure during transmission, prior to selection of an alternate channel.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.55 Communications Services shall provide the capability to enable the acceptance of non-Flash messages.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.56 Communications Services shall provide the capability to provide addressing structures interoperable with the network to which it interfaces.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.57 **Control of Internal Communications.** Communications Services shall have the capability to:

CS 3.2.7.57.1 Control the Common Management Information Protocol (CMIP) management service.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.57.2 Manage message storage space for safe store and for outgoing traffic until user preset conditions are satisfied.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.57.3 Selectively retrieve message information from the message safe store including default relay information and message status information.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.57.4 Control the substitution of defaults and multihop relay parameters.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.57.5 Monitor the status of message transmission queues, precedence transfers, and multihop relays including the parameters to modify criteria.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.57.6 Monitor status and control mechanisms for communication resources:

1. Create communications resource data log

   Traceability: ARMY, 20 July 1996
   Priority ???

2. Maintain communications resource data log

   Traceability: ARMY, 20 July 1996
   Priority ???

3. Review communications resource data log

   Traceability: ARMY, 20 July 1996
   Priority ???

CS 3.2.7.58 Communications Services shall provide the capability to send formatted messages via a Local Area Network.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.59 Communications Services shall provide the capability to receive formatted messages via a Local Area Network.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.60 Communications Services shall provide the capability to send formatted messages via a Wide Area Network.

Traceability: ARMY, 20 July 1996
Priority ???

CS 3.2.7.61 Communications Services shall provide the capability to receive formatted messages via a Wide Area Network.

Traceability: ARMY, 20 July 1996
Priority ???

3.2.8 Requirements Submitted by the Marine Corps

3.2.8.1 TADIL-A Requirements

3.2.8.1.1 Communications Services shall support the parallel interface between the Tactical Data System (TDS) and the Data Terminal Set (DTS).

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.2 Communications Services shall read data when the Prepare to Receive (PTR) command from the DTS is detected.

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.3 Communications Services shall send data when the Prepare to Transmit (PTT) command from the DTS is detected.

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.4 Communications Services shall support TADIL-A data rate of 1364 bits per second (BPS).

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.5 Communications Services shall support TADIL-A data rate of 2250 bits per second (BPS).

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.6 Communications Services shall accept messages with an error status of “no bit errors.“

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.7 Communications Services shall accept messages with an error status of “one-bit error corrected.”

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.8 Communications Services shall reject messages without an error status of “no bit errors” or “one-bit error corrected.”

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.9 Communications Services shall maintain link quality information for each operational link, based on the number of errors received. [See Rqmts 82-86.]

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.10 Communications Services shall support one TADIL-A link per station.

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.11 Communications Services shall provide a user interface to initialize a TADIL-A link.

Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.12 Communications Services shall provide a user interface to reconfigure a TADIL-A link.
Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.13 Communications Services shall provide a user interface to shutdown a TADIL-A link.
Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.14 Communications Services shall, following link interface initialization, generate the own unit PU, data-update request, and receive-quality, and send them upon transition from non-operational to receive/transmit state.
Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.15 Communications Services shall periodically send receive-quality while the link is operational.
Traceability: TADIL-A FDD 3.1
Priority ???

3.2.8.1.16 For M.1 (Data Reference Position) messages, TADIL-A shall: (1) transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]
Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.17 For M.81 (Data Reference Position Amplify) messages, TADIL-A shall: (1) transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]
Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.18 For M.2 (Air Track Position) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]
Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.19 For M.82 (Air Position Amplify) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]
Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.20 For M.3 (Surface Track Position) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]
Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.21 For M.83 (Surface Position Amplify) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]
Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.22 For M.4A (ASW Primary) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.23 For M.84A (ASW Amplify) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.24 For M.4B (ASW Secondary) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.25 For M.4C (ASW Primary Acoustic) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.26 For M.84C (ASW Primary Acoustic Amplify) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.27 For M.4D (ASW Bearing) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.28 For M.84D (ASW Bearing Amplify) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.29 For M.5 (Special Points Position) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.30 For M.85 (Special Points Amplify) messages, TADIL-A shall: (1) transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.31 For M.6A (ECM Intercept Data) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.32 For M.6B (ESM Primary) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.33 For M.86B (ESM Amplify) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.34 For M.6C (ESM Parametric) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.35 For M.86C (ESM Parametric Amplify) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.36 For M.6D (EW Coordination and Control) messages, TADIL-A shall: (1) not transmit, (2) not process, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.37 For M.9A0 (Management (Data Source Report)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.38 For M.9A1 (Management (Info Difference Report)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.39 For M.9A2 (Management (Change Data Order)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.40 For M.9A3 (Management (Data Update Request)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.41 For M.9A4 (Management (Drop Track Report)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.42 For M.9A5 (Management (Track Alert Report)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.43 For M.9A6 (Management (Controlling Unit Report)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.44 For M.9A7 (Management (Terminate Track Alert)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.45 For M.9A8 (Management (NATO Reserved)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.46 For M.9A9 (Management (IFF/SIF Management)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.47 For M.9A10-15 (Management (Undefined)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.48 For M.9B (Management (Pairing/Association)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.49 For M.9C (Management (Pointer)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.50 For M.9D (Management (TADIL-A Monitor)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.51 For M.9E (Management (Supporting Info)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.52 For M.9F (0) (Area of Probability) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.53 For M.89F (0) (Area of Probability Basic Amplify) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.54 For M.9F (1) (Area of Probability Secondary) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.55 For M.9G (Data Link Reference Point Position) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.56 For M.10A0 (Aircraft Control (Handover)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.57 For M.10A1 (Aircraft Control (Pair Eng)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.58 For M.10A2 (Aircraft Control (Xfer)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.59 For M.10A3 (Aircraft Control (RTB)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.60 For M.10A4 (Aircraft Control (Lnch Incptr)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.61 For M.10A5 (Aircraft Control (Lnch ASW)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.62 For M.10A6 (Aircraft Control (Req Cntl)) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.63 For M.11B (Aircraft Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.64 For M.11C (ASW Aircraft Status) messages, TADIL-A shall: (1) not transmit, (2) not process, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.65 For M.11D (IFF/SIF) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.66 For M.11M (EW/Intelligence) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.67 For M.811M (EW/Intelligence Amplify) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.68 For M.12.2.3 (Plain Text) messages, TADIL-A shall: (1) transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.69 For M.812.2.3 (Plain Text Amplify) messages, TADIL-A shall: (1) transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.70 For M.12.31 (Timing) messages, TADIL-A shall: (1) transmit, (2) receive, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.71 For M.14 (W/ES 0) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.72 For M.14 (W/ES 1) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.73 For M.14 (W/ES 2) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.74 For M.14 (W/ES 3) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.75 For M.14 (W/ES 4) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.76 For M.14 (W/ES 5) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.77 For M.14 (W/ES 6) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.78 For M.14 (W/ES 7) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.79 For M.14 (W/ES 10) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.80 For M.14 (W/ES 11) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.81 For M.142 (W/ES 10) (Weapon/Engagement Status) messages, TADIL-A shall: (1) not transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.82 For M.15 (CMD 0) (Command (Wpns Free)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.83 For M.15 (CMD 1) (Command (Wpns Tigt)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.84 For M.15 (CMD 2) (Command (Engage)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.85 For M.15 (CMD 3) (Command (Investigate)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.86 For M.15 (CMD 4) (Command (Cease Eng)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.87 For M.15 (CMD 5) (Command (Hold Fire)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.88 For M.15 (CMD 6) (Command (Cease Fire)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.89 For M.15 (CMD 7) (Command (Cover)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.90 For M.15 (CMD 10) (Command (Salvo/Clear Aircraft)) messages, TADIL-A shall: (1) transmit, (2) receive, (3) forward as received. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.91 For M.15 (CMD 12) (Command (Eng TN-2)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.92 For M.15 (CMD 13) (Command (Bk Eng)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.93 For M.15 (CMD 14) (Command (Go To Pt)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.94 For M.15 (CMD 15) (Command (Cease Pt)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.95 For M.15 (CMD 16) (Command (Cdct Proc)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.96 For M.15 (CMD 17) (Command (Cease Proc)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.97 For M.15 (CMD 18) (Command (Assm Duty)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.98 For M.15 (CMD 19) (Command (Cease Duty)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.99 For M.15 (CMD 20) (Command (Eng Tgt)) messages, TADIL-A shall: (1) not transmit, (2) discard, (3) not forward. [Refer to JSG/TCCCS Interface Design Handbook, Volume III Book 5, for a more detailed description of these actions.]

Traceability: TADIL-A FDD 3.2
Priority ???

3.2.8.1.100 Communications Services shall accept M-series messages received from the TADIL-A link.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.101 Communications Services shall save a copy of each received message in a received message log.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.102 Communications Services shall provide a user interface to view the list of received messages.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.103 Communications Services shall provide a user interface to save the received message log for later review or playback.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.104 Communications Services shall validate each received message sequence to ensure proper message translation can be accomplished as defined in JCS Pub 6-01.1.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.105 Communications Services shall ignore spare fields in messages when performing validation.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.106 Communications Services shall discard messages not passing validation.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.107 Communications Services shall parse and decode validated messages to determine the type of message processing necessary.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.108 Communications Services shall filter received messages based upon geographic information.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.109 Communications Services shall filter received messages based upon message identification.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.110 Communications Services shall filter received messages based upon security (SPI).
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.111 Communications Services shall filter received messages based upon link-to-link configuration.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.112 Communications Services shall provide a user interface to define filtering criteria.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.113 Communications Services shall log, but do not process, messages that match filtering criteria.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.114 Communications Services shall provide operator capability to override filtering under emergency conditions.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.115 Communications Services shall exempt certain classes of tracks from filtering, except in security and database overload situations (as described in JCS Pub 6-01.1, Section 3.7.1.1).
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.116 Communications Services shall forward each validated incoming message based upon the operational configuration of the unit.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.117 Communications Services shall forward messages to each operational link supported by the unit.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.118 Communications Services shall provide a user interface to block forwarding to particular links.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.119 Communications Services shall ensure messages pass link-forwarding filter criteria prior to forwarding.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.120 Communications Services shall reformat messages to be forwarded.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.121 Communications Services shall encode messages to be forwarded.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.122 Communications Services shall transmit messages to be forwarded.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.123 Communications Services shall forward messages between TADIL-A and TADIL-B links based on the requirements specified in JCS Pub 6-01.1

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.124 Communications Services shall forward messages received on TADIL-A to TADIL-B using the message sequencing rules specified in JCS Pub 6-01.1.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.125 Communications Services shall accept, assemble, and forward validated and parsed TADIL-B messages using the appropriate TADIL-A message sequence.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.126 Communications Services shall pass validated and parsed TADIL-A messages to the TADIL-B process for forwarding on TADIL-B

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.127 Communications Services shall separate incoming TADIL-A messages into tracks and other messages.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.128 Communications Services shall flag conditions that would cause conflict-resolution actions.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.129 Communications Services shall alert the operator of conditions that would cause conflict-resolution actions.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.130 Communications Services shall maintain link quality information, based on the error fields of messages.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.131 Communications Services shall maintain link quality information, based on the Transmit Opportunity Buffer (TOB) sequence numbers passed over the link.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.132 Communications Services shall maintain link quality status for all PUs reporting it.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.133 Communications Services shall provide a user interface to display link quality status.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.134 Communications Services shall use track contact and position information from track messages to create or update track records.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.135 Communications Services shall assign to link tracks a track number from the allocated block of track numbers defined by the operator.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.136 Communications Services shall account for track number assignments to ensure the same number is not used to report two different tracks.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.137 Communications Services shall provide a user interface to select and compare two tracks to be paired.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.138 Communications Services shall provide a user interface to remove the pairing status from a previously paired set of tracks.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.139 Communications Services shall provide support for a minimum of 1000 TADIL-A tracks.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.140 Communications Services shall process all received messages (including orders, commands and management information).
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.141 Communications Services shall notify the operator of all received messages that require a manual reply.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.142 Communications Services shall format an operator-selected reply into the appropriate M-series message and send it to the originating unit.
Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.143 Communications Services shall automatically generate machine receipts (MRs) for any messages that require confirmation of receipt.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.144 Communications Services shall provide a user interface to select any saved receive-message log and play back the messages as if they were just received.

Traceability: TADIL-A FDD 3.2.1
Priority ???

3.2.8.1.145 Communications Services shall accept data from other comms sources, such as OTCIXS and PLRS, to be sent out the TADIL-A link.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.146 Communications Services shall format M-series messages to be sent out the TADIL-A link in accordance with JCS Pub 6.01.1.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.147 Communications Services shall encode M-series messages to be sent out the TADIL-A link in accordance with JCS Pub 6.01.1.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.148 Communications Services shall send M-series messages in the sequence defined in JCS Pub 6-01.1.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.149 Communications Services shall, prior to their transmission, filter outgoing messages based on criteria defined by the operator.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.150 Communications Services shall inhibit transmission of any message that matches filtering criteria.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.151 Communications Services shall queue outgoing messages while waiting for a transmit opportunity (PTT from DTS).

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.152 Communications Services shall send only the latest track information when a track update is forwarded.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.153 Communications Services shall provide storage for 100 outgoing messages.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.154 Communications Services shall, upon detecting the Prepare to Transmit (PTT) command from the DTS, send encoded M-series messages to the DTS for transmission. [Duplicate of Rqmt 3.]

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.155 Communications Services shall discard as stale any information messages to be forwarded if a transmit opportunity does not arrive within an appropriate time period, as specified in JCS Pub 6-01.1, Section 3.2.3.1g.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.156 Communications Services shall save a copy of each transmitted message in a transmit message log.

Traceability: TADIL-A FDD 3.2.2
Priority ???

3.2.8.1.157 Communications Services shall provide a user interface to add a TADIL-A link.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.158 Communications Services shall provide a user interface to edit a TADIL-A link.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.159 Communications Services shall provide a user interface to delete a TADIL-A link.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.160 Communications Services shall provide a user interface to start a TADIL-A link.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.161 Communications Services shall provide a user interface to shutdown a TADIL-A link. [Duplicate of Rqmt 13.]

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.162 Communications Services shall provide a user interface to change the link configuration for a channel (for example, the source link or the data rate). [Duplicate of Rqmts 12 and 158.]

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.163 Communications Services shall provide a user interface to configure the mapping to forward messages for a selected PU.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.164 Communications Services shall provide a user interface to block the forwarding of messages to a particular operational link.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.165 Communications Services shall provide a user interface to display the link quality statistic: receive quality.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.166 Communications Services shall provide a user interface to display the link quality statistic: message error rate.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.167 Communications Services shall provide a user interface to display the link quality statistic: net cycle time.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.168 Communications Services shall provide a user interface to display the link quality statistic: received transmit counter.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.169 Communications Services shall provide a user interface to display the link quality statistic: received time of transmit.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.170 Communications Services shall calculate receive-quality values for the local link based upon received messages.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.171 Communications Services shall calculate receive-quality values for other PUs based on reports received from those units.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.172 Communications Services shall update link quality statistics every five seconds.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.173 Communications Services shall provide a user interface to review the list of messages in any active log. [Duplicate of Rqmt 18.]

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.174 Communications Services shall provide a user interface to review the list of messages in any saved log.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.175 Communications Services shall provide a user interface to review the list of messages in any receive log. [Duplicate of Rqmt 102.]

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.176 Communications Services shall provide a user interface to review the list of messages in any transmit log.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.177 Communications Services shall provide a user interface to select any saved receive-message log and play back the messages as if they were just received. [Duplicate of Rqmt 144.]

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.178 Communications Services shall provide a user interface to set TADIL-A link track configuration for own unit PU number.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.179 Communications Services shall provide a user interface to set TADIL-A link track configuration for starting track block numbers.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.180 Communications Services shall provide a user interface to set TADIL-A link track configuration for ending track block numbers.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.181 Communications Services shall provide a user interface to set TADIL-A link track configuration for link state.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.182 Communications Services shall provide a user interface to set TADIL-A link track configuration for amplification control.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.183 Communications Services shall provide a default setting of ON for amplification control, meaning amplification messages are always required.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.184 Communications Services shall provide a user interface to enter the Data Link Reference Point (DLRP) for each operational TADIL-A link supported.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.185 Communications Services shall provide a user interface to establish filter criteria on each available link. [Duplicate of Rqmt 112.]

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.186 Communications Services shall provide a user interface to select and compare two tracks to be paired. [Duplicate of Rqmt 137.]

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.187 Communications Services shall provide a user interface to remove the pairing status from a previously paired set of tracks. [Duplicate of Rqmt 138.]

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.188 Communications Services shall display alerts on all system consoles for track conflicts.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.189 Communications Services shall display alerts on all system consoles for active and inactive PUs.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.1.190 Communications Services shall display alerts on all system consoles for receipt of orders or commands.

Traceability: TADIL-A FDD 3.3
Priority ???

3.2.8.2 TABIL-B Requirements

3.2.8.2.1 TADIL-B shall support data rates of 1200 BPS.
Traceability: TADIL-B FDD 3.1
Priority ???

3.2.8.2.2 TADIL-B shall support data rates of 2400 BPS.
Traceability: TADIL-B FDD 3.1
Priority ???

3.2.8.2.3 The TADIL-B interface shall support up to nine connections simultaneously.
Traceability: TADIL-B FDD 3.1
Priority ???

3.2.8.2.4 Data received on TADIL-A shall be forwarded out TADIL-B.
Traceability: TADIL-B FDD 3.2
Priority ???

3.2.8.2.5 Data received via any TADIL-B connection shall be capable of being filtered and forwarded to any other TADIL-B or TADIL-A link.
Traceability: TADIL-B FDD 3.2
Priority ???

3.2.8.2.6 The TADIL-B interface shall receive incoming M-series messages according to the TAOM implementation (as described in the Joint Standardization Group/Tactical Command and Control, and Communications Systems Interface Design Handbook).
Traceability: TADIL-B FDD 3.3
Priority ???

3.2.8.2.7 The TADIL-B interface shall transmit outgoing M-series messages according to the TAOM implementation (as described in the Joint Standardization Group/Tactical Command and Control, and Communications Systems Interface Design Handbook).
Traceability: TADIL-B FDD 3.3
Priority ???

3.2.8.2.8 TADIL-B shall accept received M-series messages from the TADIL-A or TADIL-B link.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.9 TADIL-B shall validate each message sequence, as defined in JCS Pub 6-01.1, to ensure that proper message translation can be accomplished.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.10 Communications Services shall ignore spare fields in messages when performing validation.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.11 Communications Services shall discard messages not passing validation.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.12 Communications Services shall parse and decode each validated message to determine the type of message and processing to be performed.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.13 Communications Services shall filter messages based on geographic information.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.14 Communications Services shall filter messages based on message identification.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.15 Communications Services shall filter messages based on security (SPI).
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.16 Communications Services shall filter messages based on link-to-link configuration.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.17 Communications Services shall provide a user interface to define the filtering criteria.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.18 Communications Services shall log but not process messages that match filtering criteria.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.19 Communications Services shall provide a user interface to override filtering under emergency conditions.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.20 TADIL-B shall forward each validated incoming message based on the operational configuration of the unit.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.21 Communications Services shall forward messages to each operational link supported by the unit.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.22 Communications Services shall provide a user interface to block forwarding to particular links.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.23 Communications Services shall reformat and encode messages to be forwarded.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.24 Communications Services shall transmit messages to be forwarded.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.25 JMCIS USMC TADIL-B shall separate incoming messages into tracks and other messages.
Traceability: TADIL-B FDD 3.3.1
Priority ???

3.2.8.2.26 TADIL-B shall accept data from other TADIL-A or TADIL-B links to be sent out the TADIL-B connections.
Traceability: TADIL-B FDD 3.3.2
Priority ???

3.2.8.2.27 TADIL-B shall format and encode M-series messages, in accordance with JCS Pub 6-01.1, to be sent out the TADIL-B connections.

Traceability: TADIL-B FDD 3.3.2
Priority ???

3.2.8.2.28 TADIL-B shall follow the sequence requirements defined in JCS Pub 6-01.1 to send M-series messages.

Traceability: TADIL-B FDD 3.3.2
Priority ???

3.2.8.2.29 TADIL-B shall inhibit transmission of any message that matches the filtering criteria.

Traceability: TADIL-B FDD 3.3.2
Priority ???

3.2.8.2.30 TADIL-B shall follow the transmission timing requirements defined in JCS Pub 6-01.1.

Traceability: TADIL-B FDD 3.3.2
Priority ???

3.2.8.2.31 JMCIS USMC TADIL-B shall send only the latest track information when a track update is forwarded.

Traceability: TADIL-B FDD 3.3.2
Priority ???

3.2.8.2.32 TADIL-B shall save a copy of each message transmitted in a transmit message log.

Traceability: TADIL-B FDD 3.3.2
Priority ???

3.2.8.2.33 Communications Services shall provide a user interface to view the list of outgoing messages

Traceability: TADIL-B FDD 3.3.2
Priority ???

3.2.8.2.34 Communications Services shall provide a user interface to save the transmit message log for later review.

Traceability: TADIL-B FDD 3.3.2
Priority ???

3.2.8.2.35 Communications Services shall provide a user interface to select TADIL-B communications.

Traceability: TADIL-B FDD 3.4
Priority ???

3.2.8.2.36 Communications Services shall provide a user interface to configure TADIL-A/B Link communications.

Traceability: TADIL-B FDD 3.4
Priority ???

3.2.8.2.37 Communications Services shall provide a user interface to configure TADIL-A/B Link forwarding.

Traceability: TADIL-B FDD 3.4
Priority ???

3.2.8.2.38 Communications Services shall provide a user interface to process TADIL-B logs.

Traceability: TADIL-B FDD 3.4
Priority ???

3.2.8.2.39 Communications Services shall provide a user interface to monitor TADIL-A/B link quality.

Traceability: TADIL-B FDD 3.4
Priority ???

3.2.8.2.40 Communications Services shall provide a user interface to enter TADIL-A/B Data Link Reference Point (DLRP).

Traceability: TADIL-B FDD 3.4
Priority ???

3.2.8.2.41 Communications Services shall provide a user interface to select TADIL-B message filtering criteria.

Traceability: TADIL-B FDD 3.4
Priority ???

3.2.8.2.42 Communications Services shall provide a user interface to select and remove TADIL-A/B track pairing.

Traceability: TADIL-B FDD 3.4
Priority ???

3.2.8.2.43 Communications Services shall provide a user interface to support TADIL-A/B alerts.

Traceability: TADIL-B FDD 3.4
Priority ???

3.2.8.3 TCIM Requirements

3.2.8.3.1 JMCIS shall provide the capability for a LAN workstation to exchange message traffic with a LAN-external Tactical Data System (TDS) via a TCIM hosted on any LAN workstation.

Traceability: TCIM FDD 3.1
Priority ???

3.2.8.3.2 JMCIS shall support the TCIM NIFS protocol.

Traceability: TCIM FDD 3.1
Priority ???

3.2.8.3.3 JMCIS shall support the TCIM MTS protocol.

Traceability: TCIM FDD 3.1
Priority ???

3.2.8.3.4 JMCIS shall support the TCIM MTSV5 protocol.

Traceability: TCIM FDD 3.1
Priority ???

3.2.8.3.5 JMCIS shall provide support for two TCIMs per workstation.

Traceability: TCIM FDD 3.1
Priority ???

3.2.8.3.6 JMCIS shall provide a software interface to communicate with the TCIM via the SCSI bus.

Traceability: TCIM FDD 3.2
Priority ???

3.2.8.3.7 JMCIS shall provide a capability to download basic TCIM channel management software (the TCIM Controller) and supported protocols to specified TCIMs and TCIM channels.

Traceability: TCIM FDD 3.2
Priority ???

3.2.8.3.8 JMCIS shall provide the capability to configure each TCIM channel independently, without interrupting communications on the other TCIM channels, via software downloads of supported TCIM channel protocols from the host computer.

Traceability: TCIM FDD 3.2
Priority ???

3.2.8.3.9 JMCIS shall provide the capability to download TCIM operating software and supported protocols when the TCIM channel interface is started.

Traceability: TCIM FDD 3.2
Priority ???

3.2.8.3.10 JMCIS shall transmit and receive with the TCIM all defined host-TCIM interface messages, except those related to TDS protocols not supported by JMCIS.

Traceability: TCIM FDD 3.2
Priority ???

3.2.8.3.11 JMCIS shall generate a standardized message header (the "Common Message Header") to precede each message sent to the TCIM.

Traceability: TCIM FDD 3.3
Priority ???

3.2.8.3.12 JMCIS shall set the Routing field of the Common Message Header to route messages generated by a host application to the appropriate destination in the TCIM.

Traceability: TCIM FDD 3.3
Priority ???

3.2.8.3.13 JMCIS shall accept messages from the TCIM for which TCIM has performed Lower Layer Protocol (LLP) processing.

Traceability: TCIM FDD 3.3
Priority ???

3.2.8.3.14 JMCIS shall accept the Common Message Header from TCIS preceding each message received from the TCIM.

Traceability: TCIM FDD 3.3
Priority ???

3.2.8.3.15 Messages shall be built by JMCIS (in accordance with the TCIS Interface Design Document) and put into an outgoing queue.

Traceability: TCIM FDD 3.3
Priority ???

3.2.8.3.16 JMCIS shall support receipt of OTH-GOLD formatted messages through the TCIM channel.

Traceability: TCIM FDD 3.3
Priority ???

3.2.8.3.17 JMCIS shall support transmission of OTH-GOLD formatted messages through the TCIM channel.

Traceability: TCIM FDD 3.3
Priority ???

3.2.8.3.18 JMCIS shall support receipt of binary messages, to include Air Tasking Orders (ATOs), through the TCIM channel.

Traceability: TCIM FDD 3.3
Priority ???

3.2.8.3.19 JMCIS shall support transmission of binary messagess, to include Air Tasking Orders (ATOs), through the TCIM channel.

Traceability: TCIM FDD 3.3
Priority ???

3.2.8.3.20 JMCIS shall provide a user interface which includes the TCIM as an available communications circuit/interface that may be added.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.21 JMCIS shall provide a user interface which includes the TCIM as an available communications circuit/interface that may be configured.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.22 JMCIS shall provide a user interface to configure a channel from any connected TCIM.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.23 JMCIS shall provide a user interface to identify the tactical communications equipment to be connected to the TCIM channel in accordance with devices which are valid for the channel (including AN/PRC-77, AN/PRC-104, and SINCGARS combat net radios).

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.24 JMCIS shall provide a user interface to select a supported protocol to configure the TCIM channel.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.25 JMCIS shall provide a user interface to configure the Modulation of the TCIM channel, consistent with the selected protocol and tactical communications equipment.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.26 JMCIS shall provide a user interface to configure the Data Rate of the TCIM channel, consistent with the selected protocol and tactical communications equipment.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.27 JMCIS shall provide a user interface to configure the Amplitude of the TCIM channel consistent with the selected protocol and tactical communications equipment.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.28 JMCIS shall provide a user interface to configure the Subscriber Address of the TCIM channel consistent with the selected protocol and tactical communications equipment.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.29 JMCIS shall provide a user interface to select available data rates (up to 1200 baud) for the AN/PRC-77 combat net radio.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.30 JMCIS shall provide a user interface to select available data rates (up to 1200 baud) for the AN/PRC-104 combat net radio.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.31 JMCIS shall provide a user interface to select available data rates (up to 16k baud) for the SINCGARS combat net radio.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.32 JMCIS shall provide error alerts when the operator has made an error in configuring a TCIM channel.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.33 JMCIS shall provide a user interface to stop a specified TCIM channel.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.3.34 JMCIS shall provide a user interface to restart a specified TCIM channel using the latest saved TCIM channel configuration settings.

Traceability: TCIM FDD 3.4
Priority ???

3.2.8.4 TLC-10 Requirements

3.2.8.4.1 JMCIS shall provide the capability to establish and enable a serial communications channel to the TLC-10.

Traceability: TLC-10 FDD 3.0
Priority ???

3.2.8.4.2 JMCIS shall provide the capability to configure the TLC-10 to communicate to external systems using the AUTODIN Mode I protocol.

Traceability: TLC-10 FDD 3.0
Priority ???

3.2.8.4.3 The TLC-10 configuration parameters shall be consistent with those outlined in Table 8-6 MODE_I User Configuration Parameters of the Computer System Operator's Manual for the Intelligence Analysis System (IAS-CSOM), Marine Corps Tactical Systems Support Activity, Version 2.2, 28 February 1995.

Traceability: TLC-10 FDD 3.0
Priority ???

3.2.8.4.4 JMCIS shall provide the capability to transmit formatted messages over the serial channel to the TLC-10 within the existing JMCIS Communication Server architecture.

Traceability: TLC-10 FDD 3.0
Priority ???

3.2.8.4.5 JMCIS shall provide the capability to transmit binary messages over the serial channel to the TLC-10 within the existing JMCIS Communication Server architecture.

Traceability: TLC-10 FDD 3.0
Priority ???

3.2.8.4.6 JMCIS shall provide the capability to receive formatted messages over the serial channel to the TLC-10 within the existing JMCIS Communication Server architecture.

Traceability: TLC-10 FDD 3.0
Priority ???

3.2.8.4.7 JMCIS shall provide the capability to receive binary messages over the serial channel to the TLC-10 within the existing JMCIS Communication Server architecture.

Traceability: TLC-10 FDD 3.0
Priority ???

3.2.9 JMCIS-PLRS Interface (JPI) Requirements

3.2.9.1 Communications Services shall provide communications interface between JMCIS and PLIS.

Traceability: JPI FDD 3.1
Priority ???

3.2.9.2 Communications Services shall correlate PLI updates.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.3 Communications Services shall store PLI updates.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.4 Communications Services shall support the Master Station (MS) EPLRS/PLRS unit type.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.5 Communications Services shall support the Auxiliary Ground Unit (AGU) EPLRS/PLRS unit type.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.6 Communications Services shall support the Manpack Unit (MPU) EPLRS/PLRS unit type.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.7 Communications Services shall support the Surface Vehicle Unit (SVU) EPLRS/PLRS unit type.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.8 Communications Services shall support the Airborne Rotary Wing Unit (ARU) EPLRS/PLRS unit type.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.9 Communications Services shall support the Airborne Fixed Wing Unit (AFU) EPLRS/PLRS unit type.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.10 Communications Services shall support the Unknown (UNK) EPLRS/PLRS unit type.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.11 Communications Services shall maintain history of EPLRS/PLRS units.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.12 Communications Services shall maintain PLIS position accuracy.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.13 Communications Services shall provide functionality to transmit PLI data to other systems over existing JMCIS communications channels.
Traceability: JPI FDD 3.2
Priority ???

3.2.9.14 Communications Services shall display EPLRS/PLRS units on a geographic map.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.15 Communications Services shall display amplifying information for a selected EPLRS/PLRS unit.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.16 Communications Services shall display a summary list of EPLRS/PLRS units in tabular format.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.17 Communications Services shall display the Infantry (INF) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.18 Communications Services shall display the Armor (ARM) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.19 Communications Services shall display the Reconnaissance (REC) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.20 Communications Services shall display the Engineer (ENG) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.21 Communications Services shall display the Artillery (ATY) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.22 Communications Services shall display the Antitank (AT) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.23 Communications Services shall display theAviation (USAF) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.24 Communications Services shall display the Combat Service Support (CSS) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.25 Communications Services shall display the Armored Reconnaissance (ARC) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.26 Communications Services shall display the Rocket Artillery (RAT) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.27 Communications Services shall display the Mechanized Engineer (ENG) military symbol in accordance with FM 101-5-1.
Traceability: JPI FDD 3.3
Priority ???

3.2.9.28 Communications Services shall display the Artillery Forward Observer (AFO) military symbol in accordance with OTH-GOLD, Rev.B.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.29 Communications Services shall display the Infantry Forward Observer (IFO) military symbol in accordance with OTH-GOLD, Rev.B.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.30 Communications Services shall display the Signal/Communications (COM) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.31 Communications Services shall display the Transportation (TRN) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.32 Communications Services shall display the Medical (MED) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.33 Communications Services shall display the Maintenance (MNT) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.34 Communications Services shall display the Marines (MAR) military symbol.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.35 Communications Services shall display the Army Aviation (Fixed Wing) (AVF) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.36 Communications Services shall display the Army Aviation (Helicopter) (AVH) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.37 Communications Services shall display the NBC (NBC) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.38 Communications Services shall display the Airborne (ABN) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.39 Communications Services shall display the Airmobile (AMB) military symbol in accordance with OTH-GOLD, Rev.B.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.40 Communications Services shall display the Ordnance (ORD) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.41 Communications Services shall display the Supply (SUP) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.42 Communications Services shall display the Air Defense (AD) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.43 Communications Services shall display the Surface-to Surface Missile (SSM) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.44 Communications Services shall display the Surface-to-Air Missile (SAM) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.45 Communications Services shall display the Combat Electronics Warfare Intelligence (EWI) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.46 Communications Services shall display the Special Forces (SFO) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.47 Communications Services shall display the Meteorological (MET) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.48 Communications Services shall display the Reference Unit (REF) military symbol in accordance with PLRS PPS.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.49 Communications Services shall display the Orbit Point (ORB) military symbol in accordance with PLRS PPS [equivalent to Coord Pt in FM 101-5-1].

Traceability: JPI FDD 3.3
Priority ???

3.2.9.50 Communications Services shall display the Mechanized Infantry (MI) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.51 Communications Services shall display the Armored Artillery (AAT) military symbol in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.52 Communications Services shall display the Section/Squad (12) size indicator in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.53 Communications Services shall display the Platoon/Detachment (36) size indicator in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.54 Communications Services shall display the Company/Battery/Troop (150-200) size indicator in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.55 Communications Services shall display the Battalion/Squadron (450-1000) size indicator in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.56 Communications Services shall display the Group/Regiment (1500-3000) size indicator in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.57 Communications Services shall display the Brigade (5000-7000) size indicator in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.58 Communications Services shall display the Division (15,000-21,000) size indicator in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.59 Communications Services shall display the Corps (45,000-60,000) size indicator in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.60 Communications Services shall display the Army (105,000-180,000) size indicator in accordance with FM 101-5-1.

Traceability: JPI FDD 3.3
Priority ???

3.2.9.61 Communications Services shall support Military Symbols in accordance with definitions specified in Field Manual 101-5-1, Operational Terms and Symbols, (FMÊ10-5-1). (Duplicate of Rqmts 17-51, excluding 28, 29, 34, 39, and 48.)

Traceability: JPI FDD 3.3
Priority ???

3.2.9.62 Communications Services shall display the the EPLRS/PLRS Unit Type Symbols specified in the PLRS PPS. (Duplicate of Rqmts 4-10.)

Traceability: JPI FDD 3.3
Priority ???